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The discovery of oil off the coast of the Western Region has significantly altered the spatial and socio-economic profile of Sekondi-Takoradi, the most industrialised urban settlement closest to the oil fields. Existing research on the impacts of oil is typically framed around the resource curse doctrine, which draws a determinist link between reliance on oil and socio-economic conditions, but primary data collected in Sekondi-Takoradi show a more nuanced reality. The urban landscape in the city has undergone rapid changes, including the influx of migrants. This situation coupled with the presence of international oil companies is driving spin-off investments in the city's real estate market and major commercial developments such as malls and five-star hotels. Oil is, therefore, driving the economic growth of the city in sync with the Takoradi Port that is also expanding strategically to accommodate demands of the oil industry. These changes present fresh challenges to the city authorities, however, and are likely to overwhelm current capacity. **Keywords:** Oil and gas, Sekondi-Takoradi, Ghana, oil impacts, urban transformations, land use, city management.

INTRODUCTION

The year 2007 has been described by Obeng-Odoom (2014) as a watershed in the history of Ghana. It witnessed the discovery of oil, in commercial quantities, off the coast of the Western Region. In June and September 2007, a consortium of companies comprising Kosmos Energy Ghana (Kosmos), Tullow Ghana Limited (Tullow), Anadarko Petroleum Corporation, Sabre Oil and Gas Limited and the E. O. Group, in conjunction with the Ghana National Petroleum Corporation (GNPC), announced discoveries of significant quantities of oil and gas in offshore deepwater Tano/Cape Three Points Basins, some 63 nautical miles away from one of Ghana's foremost industrial city, Sekondi-Takoradi (Figure 1). The discovery, christened Jubilee Field, now produces some 108,000 barrels of sweet crude oil per day (2015 average) amid a myriad of infrastructural challenges.

Although currently described by the U.S Energy Information Administration (2016) as a 'small oil and gas producer' in Africa, Ghana is set to significantly in-

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crease its output within the next decade in light of more offshore discoveries. One of such discoveries, the Tweneboa, Enyenra, and Ntomme (TEN) field, being developed by Tullow Ghana Limited produced its first oil in August 2016 and is expected to pump about 80,000 barrels of crude oil per day at full capacity while adding another 30 million cubic feet of natural gas per day to the country's current output (Tullow, 2015). Indeed, the development of TEN and similar discoveries in the near future could propel Ghana towards becoming a 'mid-level player' in the world's oil and gas industry.



Figure 1: Ghana's operational oil fields in relation to Sekondi-Takoradi.

Source: Ablo 2016, pp6.

Most economic and social commentators, especially within the country, have touted the discovery as a major fiscal breakthrough. Saminu (2009) and Osei (2009) however, have not been as optimistic. Rather, they highlight the possible dangers of experiencing the infamous resource curse. In fact, experiences with oil discoveries and subsequent production in Algeria and Nigeria are well documented (Sachs & Warner, 2001; Karl, 1997) and make the resource curse doctrine a very safe and attractive option when analysing the Ghanaian case. Oyono *et al.*, (2006), for example, argue that oil has made it difficult for countries to enhance public participation in Cameroon while others such as Lybia and Chad spend oil revenues on military disbursements (Obeng-Odoom, 2014) to the detriment of human development. According to Obeng-Odoom (2015), existing research on West Africa's oil economy has been both analytical and empirical. The earliest papers such as McCaskie (2008)

and King (2009) focused on investigating in what ways oil could be a blessing or a curse. However, recent work (e.g., Mabe, 2013; Obeng-Odoom, 2014; Ablo, 2015; Eduful and Hooper, 2015) have all critically assessed the effects of oil on the urban growth and development of Sekondi-Takoradi as the biggest urban settlement closest to the oil fields. The focus of this paper is to extend this body of work and critically analyse the case of Sekondi-Takoradi as one of Africa's newest emerging oil cities. It is an evidence-based attempt to respond to UNDP's call for more research on urban developmental changes within the Sekondi-Takoradi metropolis since the discovery of oil (UNDP, 2013; Obeng-Odoom, 2015). Preliminary assessments by Obeng-Odoom (2009) indicate that the impact of the activities is expected to affect six communities in the Western Region: Jomoro, Ellembele, Nzema East, Ahanta West, Shama and Sekondi-Takoradi. However, most literature (Eduful and Hooper, 2015; Obeng-Odoom, 2014) about the oil find acknowledges Sekondi-Takoradi as potentially the most impacted community due to certain factors. These factors include the presence of a commercial airport and the role of Sekondi-Takoradi as a port city. The Takoradi Port is expected to handle all imports of equipment for the drilling as well as exports of crude oil from the jubilee field. Sekondi-Takoradi is also a highly industrialised city with many light and heavy manufacturing companies producing goods and services for both the basic and non-basic sectors of the economy. These factors already make the twin city a pull centre for migrant population who rush there for employment opportunities and access to infrastructural services (Adarkwa, 2012).

It is, therefore, safe to suggest that the advent of oil can only exacerbate the existing urban governance challenge of ensuring equitable distribution of infrastructural services and public safety in the midst of increasing population levels. The preparation of a comprehensive Master Plan for the Sekondi-Takoradi Metropolis with support from the Jubilee Partners can, therefore, be seen as a major landmark in the development process of the city. The plan will seek to set the development agenda for the twin city over the next 15-20 years, integrating social and economic policies which impact the city, be it international, national, regional or local, into the spatial aspects of growth (STMA, 2012) and can be comprehended as part of an emerging strategy by transnational companies to strengthen the capacity of district, regional and national level institutions in managing the expected pressure on land resources as a result of oil. Consequently, post-oil urban planning initiatives have so far seen the preparation of the Western and National Spatial Development Frameworks with support from the Norwegian Oil for Development Programme and International Development Agency respectively.

Notably, Sekondi-Takoradi's status as an oil city unlike Port Harcourt in Nigeria is established not because of the contribution of oil rents to its local economy but rather the potential for social and spatial transformation of the city's landscape in response to oil-driven infrastructural investments. A cursory synopsis of the city's developmental pattern over the past 5 years point to a worrying trend of major land use changes to incorporate the oil and gas industry and spin-off investments in complementary infrastructural services. This paper, proffers a simple situational analysis of changes in the urban growth of Sekondi-Takoradi since oil. I choose to call these changes the 'hard impacts of oil' mainly because these can be seen and felt by citizens as against the 'soft impacts of oil' which relate to the rather 'cloaked' and commonly 'opaque' pecuniary benefits of oil.

POPULATION GROWTH

Evidence from other countries has revealed that greater urbanisation follows the discovery and exploration of oil (Keizeiri, 1983; Jike, 2004). There is strong evidence that oil is attracting huge population migration into the Sekondi-Takoradi Metropolis especially Takoradi where most of the economic activities are found (Obeng-Odoom, 2009; 2014). This can ordinarily be seen in the increase in both human and vehicular traffic as well as the increased demand for land and accommodation (Obeng-Odoom, 2015). Takoradi is already an attractive city for migrants due to many factors. It is home to about 10.2 percent of all industrial establishments across the country (Songsore, 2010). Takoradi has, therefore, in the past experienced rapid growth and expansion as it gradually established itself as a major activity centre following the construction of the port in 1928 and many other industries to boost the country's export of raw materials (Songsore, 1979). But the current increases are extensive in their impact as the evidence suggests.

The population of the metropolis increased tremendously from 359,363 in 2000 to 559,548 people by 2010 (Ghana Statistical Service, 2012), approximately three years after oil was discovered in commercial quantities offshore. The current estimate for the metropolis stands at about 677,988 and is further projected to hit about 700,034 by the end of 2017 with a growth rate of 3.2 per cent (STMA, 2015), which is substantially higher than the national average population growth rate of 2.5 per cent. This growth in population reverses an earlier decline in population in 2007 after the passage of the Legislative Instrument-1882 which alienated the neighbouring Shama District Assembly out of the then Shama Ahanta East Metropolitan Assembly, of which Sekondi-Takoradi was the capital. With the 2010 Housing and Population Census reporting the population of Shama District Assembly to be 81,966 (Ghana Statistical Service, 2012), it is safe to suggest that oil had a significant role to play in boosting the number of residents within the metropolis to the current 677,988 even without Shama.

On the one hand, the increase in the size of the population in Sekondi-Takoradi is good. It can help to ensure a balance in population distribution within Ghana's urban centres, particularly because there is some indication that the new residents are from urban centres such as Kumasi and Accra (Obeng-Odoom, 2014), which account for well over 30-40 per cent of the total urban population (STMA, 2012). On

the other hand, the increase in population in Sekondi-Takoradi is likely to intensify or even create new urban governance challenges for city authorities. As Adarkwa (2012) suggests, the congestion and uncontrolled development as well as poor sanitary conditions in big urban areas in the country are the result of a weak planning system that is overwhelmed by limitations of human and financial resources in the midst of rapid urbanisation. Meaning, if systems remain the same, Sekondi-Takoradi is also well on course to experiencing the same urban challenge as Accra which has seen its growth develop into an amorphous and largely inefficient urban form (Yankson and Bertrand, 2012). The recent 2010 Population and Housing Census (Ghana Statistical Service, 2012) also attributes the relatively high urban population in Kumasi and Accra to the concentration of industries and commercial activities in those cities, thereby triggering a sustained process of in-migration of some remote population. It is therefore safe to emphatically state that, with a more fancy tag as an oil city, Sekondi-Takoradi has attracted and will continue to entice lots of migrant population in search of perceived increase in access to opportunities.

URBAN TRANSFORMATIONS

There is enough evidence from many African oil cities such as Sekondi-Takoradi to suggest that oil discoveries and subsequent production triggers rapid oil-induced urbanisation through in-migration of people in search of oil opportunities. This subsequently creates a sustained pressure on land for various uses. Increased demand for accommodation, for example, by people who travel to oil cities prompts some considerable response from the real estate sector (Obeng-Odoom, 2009; 2014). Others want to establish businesses and build offices for their operations within the city. The city is therefore experiencing changes in its land use pattern, on a scale that has never been seen before. These changes continue to be driven by the oil companies, the private sector generally and public sector initiatives (Obeng-Odoom, 2014). From the scenic renewal of the 5-Star Best Western Plus Hotel along the coast of the twin city to the development of new housing forms such as the Takoradi Oil Village and the proposed King City, the city's urban landscape is enjoying a new lease of life.

Commercial land use developments such as hotels and supermarkets seem to be the most common land use proposals driving this change in the city. While existing establishments such as Raybow Hotel, All Needs Supermarket are rapidly and strategically expanding to take advantage of this new lease of life, 'newcomers' are also strategically assessing the situation to beef up competition. There is even a major proposal to construct Sekondi-Takoradi's first ever mall at the heart of the city. Its proposed location, near a major intersection at the Kwame Nkrumah Roundabout, similar to the Tetteh Quarshie Roundabout near Ghana's first Mall; Accra Mall, raises a lot of questions with regards to expected impact on traffic congestion.

Nevertheless, the proposed 65-million-dollar Takoradi Mall is poised to be constructed after the project was given strong support in 2015 by participants at a recent public hearing, made up of traditional authorities, artisans, mechanics, civil society organizations, politicians and a section of the public (City FM, 2015). Already, some 500 structures which belong to the over 2,000 artisans who once occupied the proposed site for the mall have been demolished (Modern Ghana, 2015). The developers of the mall, RMB Westport Properties Ltd already has an enviable history of investing in prime locations across the African continent, especially in oil rich countries-- Angola, Nigeria and more recently Ghana, most often taking advantage of oil-induced urbanisation to do good business. It currently owns some five major commercial properties across Ghana and Nigeria alone including The Ikeja City Mall in Lagos, Nigeria which attracts over 800,000 visitors per month (RMB Westport Properties Ltd., 2015) while investing to develop another six, spread across Angola, Nigeria and Ghana. All these developments have changed and continue to influence the scenic transformation of the urban landscape of their host cities. Takoradi therefore stands to benefit greatly from the imminent arrival of the Takoradi Mall representing a major change in the city's urban landscape that has the potential to act as a nucleus for subsequent urban development integrating a commercial public space into the existing urban fabric (Kocaili, 2010).

The hospitality industry has not been left out of the urban economic transformations in Sekondi-Takoradi. In fact it has witnessed the most change in terms of real investments and expansion to date. The city's first ever 5-star hotel, Best Western Plus Atlantic Hotel, was opened to the general public in September 2012 (Obeng-Odoom, 2014), some five years after oil was discovered while many others (Raybow Hotel, Hillcrest and Planters Lodge) have expanded strategically to accommodate the huge influx of expatriates working in the oil industry. For example, Raybow has redeveloped its edifices to accommodate over 60 apartments since 2007 while Planters also expanded to 45 rooms. More recently, Protea Hotel, a 4-star hotel with 136 rooms was opened in 2015 to also serve the taste of the wealthy oil class (Obeng-Odoom, 2014).

Records from the Physical Planning Department of the Sekondi-Takoradi Metropolitan Assembly show that construction of hotels and guest houses is on the rise. In 2011 alone, city authorities approved the construction of some 4 major developments across the city. Since then, 8 similar developments have been granted building permits to commence construction. These developments continue to be motivated, to a large extent, by the influx of expatriate workers in the oil industry who prefer hotel accommodation to long-lease rental apartments. Even the massive renewal and expansion of existing developments have been very deliberate to attract oil clientele. Best Western Plus Atlantic Hotel, Raybow Hotel, Hillcrest and Planters Lodge are all located within the Beach Road high-class residential area which is also home to the Takoradi Port and in proximity to the Takoradi Airport (Figure 2) thereby making it easier for oil workers to fly to and from the Jubilee Field. In terms of leisure, it is also attractive with nightclubs such as Paragon, and top restaurants such as Captain Hooks dotted across its rather large exclusive neighbourhood. The scenic beaches connected by a good road network also feature greatly in the analysis of investors who are trooping into the city on daily basis.



Figure 2: Map of Sekondi-Takoradi showing the location of Beach Road in relation to the airport and port.

Accompanying these welcome investments in the hospitality sector is the increase in nightlife activities in the city as can be seen in the proliferation of nightclubs and pubs. The likes of Vienna City, Paragon and Tilly's have changed the definition of the city's rather dull nightlife. This is not to say that the city had no places of entertainment prior to 2007. Indeed, there were many places of entertainment long before oil. The Sphinx, The Mainland Social Centre and The Empire Night Club all served as hotbeds for evening 'chilling' (Sekondi-Takoradi City Council, 1963). The boom in economic activities within the city following the establishment of the port in 1928 attracted lots of migrant workers including expatriates who trooped in to take advantage of opportunities. Most migrants therefore heavily patronised the city's night clubs and pubs in the midst of sex workers especially within the CBD. So perhaps, it would be safe to imply that the increase in nightlife activities in the city following oil is nothing new or was meant to occur, given its history. However, the nature and scale of current development and sophistications are unprecedented. The most dramatic change is the establishment of Vienna City Club at Beach Road, as distinct from Vienna City Beach in Chapel Hill (Obeng-Odoom, 2014). Established in 2011 by Vienna City Ltd., a popular entertainment and hospitality company, it has remained the focal point of nightlife within the city. It is located near the Beach Road roundabout and very close to the luxurious Akroma Plaza Hotel. It boasts of a restaurant, casino, pool tables and other modern devices that can be found in night clubs across the world (Obeng-Odoom, 2014). With over ten years of experience in the entertainment industry, Vienna City Ltd. has gained considerable popularity and recognition as a major service provider. The company's chain of investments across Ghana's major cities includes hotels, restaurants, night clubs and casinos. Close by is Paragon, a recently refurbished state of the art edifice that also has all the characteristics to attract the wealthy oil working class. Prior to the existence of Vienna, the old version of Paragon was the toast of town although it could only boast of a dancefloor and a bar. Paragon has now been redesigned and refurbished to accommodate a Bar & Grill cafeteria, as separate from the nightclub serving continental dishes at relatively expensive prices. It is therefore not uncommon to see expatriates and the city's elites enjoying its lush milieus. At the core of these investments is the rather conspicuous presence of sex workers especially near the Beach Road Roundabout. The activities of 'sisters', as they are locally referred to, have characterised the city's nightlife in recent times. Constituted by Ghanaians, Nigerians, Ivorians, Cameroonians and nationals of other African countries, sisters can be seen dressed in extremely provocative dresses while negotiating and enticing prospecting clients to 'service' them. They can be found loitering near the carpark of Vienna around one of the city's busiest roundabouts in terms of vehicular traffic (Obeng-Odoom, 2014).

The urban centre is also undergoing significant changes to accommodate the influx of commercial and civic uses. Residential buildings in the CBD are continually being lost to commercial and civic activities as more offices come in, in response to the oil discovery (Eduful and Hooper, 2015). Many new banks have been established, most in the CBD or close to it. The increased demand for space in the CBD has, therefore, resulted in increased land values. Some property owners are taking advantage of the situation by converting rooms into stalls and other facilities to meet the demand of the banking institutions that are trooping the city (Obeng-Odoom, 2009; 2014). Litigations and forced ejections are also on the increase. Tenants who were formerly paying less than GH¢50 (US\$12) per month are now forced to pay up to GH¢200 (US\$46) or more depending on location within the city. This situation often leads to the development of more informal settlements as some ejected tenants find their way into already existing slum areas in parts of Effiekuma, New Takoradi and Kwesimintsim (Obeng-Odoom, 2009, 2014; Eduful and Hooper, 2015). This is a source of worry for urban managers as these areas are

already characterised by high population densities, substandard housing and poor infrastructural services.

The housing market in Ghana has always been dominated by the private sector. By engaging the services of local artisans, most individuals are able to provide housing for themselves on incremental basis (UN-HABITAT, 2011). Consequently, the role of the central government in housing provision has been low although, historically, the establishment of the Ministry of Housing as well as the Social Security and National Insurance Trust (SSNIT) and the Tema Development Corporation (TDC) added significant numbers to the country's current stock (Adarkwa, 2012). The central government has therefore encouraged private sector-led housing through tax policies and other housing policies over the years. Notable examples include the reduction in corporate tax from 55 per cent to 45 per cent, a 5-year tax holiday has also been given to private real estate developers while houses bought from private developers were also exempted from Stamp Duty payments (Asiedu and Arku, 2009). The government has also taken the initiative to provide the necessary infrastructure like roads to entice private real estate development. Oil induced housing developments across the city such as the Takoradi Oil Village are however dollarized and expensive relative to incomes. In the Beach Road high class residential area, for example, a furnished two to three bedroom house can rent for US\$4000 to US\$8000 per month, while if unfurnished, it can rent for between US\$2000 and US\$4000 (Eduful and Hooper, 2015). Although the situation is significantly different in other parts of the city such as Anaji, with rental values going for a minimum of US\$130 (Eduful and Hooper, 2015) depending on size and location, it is still too expensive relative to the city's average household income of US\$15.87 per day (CHF, 2010) in these areas. Many Ghanaians cannot afford these private sector houses with about 31 per cent of the population living under US\$1.25 a day (Obeng-Odoom, 2013).

URBAN TRANSPORTATION

Historically, the growth of Sekondi-Takoradi was driven to a large extent by its port and railway infrastructure (Tsey, 2012). However, it is the automobile industry that has characterised the city's urban transportation system in recent years. While the city's rail and port set-up was seen as integral to the export of Ghana's diverse natural resources to external markets, they were never designed to enhance intraurban travelling (Obeng-Odoom, 2015). Consequently, the rapid growth of the city over the years coincided with considerable investments in road infrastructure as a more feasible option. Sekondi-Takoradi now has a total urban road network of 688.43 kilometres of which 55 per cent are paved (STMA, 2015) including a section of the Trans-ECOWAS Highway which runs through the Central Business District. The city's road network is, however, riddled with many challenges. The Draft Structure Plan for STMA highlights the following challenges with regards to transportation and related infrastructure;

- 1. Several road links in the residential neighbourhoods are un-engineered and in a deplorable state;
- 2. There is a high incidence of avoidable traffic on the major road links;
- 3. The surge of heavy cargo traffic to and from the harbour has prematurely deteriorated some key arterial roads;
- 4. Taxis have become the predominant mode of public transportation;
- 5. There is unbearable congestion as well as insanitary conditions at the transport terminals none of which is planned, designed nor engineered; and
- 6. The city centre faces major challenges of parking infrastructure as well as pedestrian movement.

A crucial effect of oil discoveries is the associated upsurge in transport-related problems. It is an undeniable fact that the forces that draw inhabitants to congregate in large urban areas also lead to intolerable levels of traffic congestion on urban streets (Mahama, *et al.*, 2013). The transport sector in Sekondi-Takoradi has, therefore, not been spared the impact of oil. There is high incidence of traffic congestion in the city with the increase in both human and vehicular traffic (Fiave, 2011). According to the city's Department of Urban Roads, the transport system in the city is radial with arterials and few interconnections. This poses a great challenge considering the fact that the original plan for the whole metropolis did not take into consideration the topography offers few alternative routes leading to constant traffic congestion on the major and minor arterials during peak hours of the day. At present, motorists use the only two major asphalted roads in the city that lead to the CBD. There is the main road through Essipon through Sekondi to the CBD and the Accra road which runs through Kojokrom to the CBD.

In recognition of the existing challenges and potential problems posed by the oil discovery, the Department of Urban Roads in Sekondi took various steps to address the situation. In 2009, the Department reviewed the existing Transport Plan for the city as well as the Traffic Management Report for 2008 in an attempt to strategically align itself to accommodate the inflow of both human and vehicular traffic (Fiave, 2011). Simply, the Department compared the annual growth of traffic volume to the design capacity of roads within the city to serve as basis for decisions on road expansions, maintenance and construction.

Sekondi-Takoradi, however, did not see any improvements in terms of road construction or expansion until 2011. The result is the constant traffic congestion that plagued the city's major roads during peak hours of the day (Fiave, 2011). It is, however, encouraging to note that the Department initiated plans in 2010 to develop alternative routes as well as strategically expand existing single lane roads to double lanes in expectation of increase in developments in the city. Since then, a number of projects have been implemented in a bid to improve the transportation network within the metropolis. Notable amongst these on-going projects is the construction of the Kansaworado bypass aimed at diverting traffic away from the city centre. A major proposal has also been forwarded to the Ministry of Roads and Transport to replace the Paa Grant and Kwame Nkrumah roundabouts with flyovers (STMA, 2010). A review of the Medium Term Development Plan 2010-2013 further reveals that some 30km of road network across the city was resurfaced or reengineered. Additionally, 90% of road maintenance had been fully implemented by the Department of Urban Roads to ease the burden of the increasing traffic congestion. A metro wide asphalting of major roads is also ongoing following a promise made by the ruling government to the Chiefs and people of the Western Region in 2014 to improve roads in the region. So far over 20km of road infrastructure in the city have received major rehabilitation works in the form of asphalt overlay. This has brought joy to motorists who previously had to deal with the many potholes that characterised the city's road network. The entire rehabilitation work on the city's roads is expected to cover a further 25km of roads estimated at about GH¢25million (US\$5.7 million).

The second phase of the rehabilitation works has commenced with Kwesimintsim and neighbourhoods close to the CBD all seeing improvements (*Daily Graphic*, 2015). It is obvious that the improvement in road conditions across the city, coupled with the influx of people and businesses, has the potential to rapidly boost local economic development as all major roads leading to the CBD as well as the Takoradi Port are being given a facelift.

Table 1. Wajor road improvements since 2010			
No.	Project	Percentage completion	Status
2	Reseal 30 km of road network-Metro Wide	80%	On-going
3	Resurfacing of internal roads-Metro Wide	65%	On-going
4	Partial reconstruction of New-Takoradi GHACEM road	30%	On-going
5	Maintenance of Roads-Metro Wide	90%	On-going
6	Pavement of harbour taxi rank at Takoradi	100%	Fully implemented

Table 1: Major road improvements since 2010

Source: STMA MTDP (2013-2017)

LAND ISSUES

Ownership of land in Sekondi-Takoradi is dominated by the Ahantas, Nzemas and Fantes, the three most common tribes in the city. However, with the exception of state owned lands, the allocation and disposal of lands are the exclusive responsibility of local chiefs, family heads and some individuals of these ethnic groups. Each of these classes has a different set of property rights related to how land is owned in the city (Obeng-Odoom, 2014). Under the current land laws however, foreigners are only allowed to enter into long-term leases of up to 50 years while citizens can lease up to 99 years. So while land is generally available to both indigenes and expatriates who express interest, it is the latter that are targeted by the land owners nowadays, resulting in the dollarization of the land market (Eduful and Hooper, 2015). As suggested earlier, with the oil industry becoming a primary growth driver of Sekondi-Takoradi comes the more extensive use of land for roads, housing, industry and commerce. Such additions to the value of land tend to increase rent captured by landowners. There is, therefore, more motivation for the land owners to leave their land untouched to accumulate value resulting from investments in public infrastructure (Obeng-Odoom, 2009; 2014; 2016). Complementing the upwards improvements in land values is the rather worrying activities of land speculators. Speculators acquire huge tracts of lands and hold them outside the property market in anticipation of higher values in future. Land speculation has been on the increase in the Western Region in general since oil (Mabe, 2013). This often creates scattered urban settlements interspersed with large chunks of undeveloped lands thereby making it difficult and much more expensive to provide urban services. A recent survey by Mabe (2013) found out that land values increased by as much as 62.5 per cent between 2008 and 2009, in view of the oil find and subsequent spinoff investments in related infrastructure. He also found out that speculation was on the increase within the entire Sekondi-Takoradi metropolis. This is a major source of worry for city authorities as they struggle to exert greater control over the supply and management of land for infrastructural development. Already, the delivery of land for residential, industrial and commercial purposes in most urban areas in the country has been slow, inefficient and characterised by extremely high prices, multiple sales, title disputes and litigations. Compounding this problem is the worrying fact that land sector agencies are weak in personnel, funding, equipment and other support services to execute their mandates effectively (Kasanga and Kotey, 2001). Although the city has developed a comprehensive spatial plan to guide the physical development of the city for the next two decades, its implementation has rather been dawdling as the negative impacts as a result of the lack of development control to drive spatial planning are evident.

A major source of impact on the environment is the ongoing expansion works at the Takoradi Port to meet the demands of the emerging oil industry. Established in 1928 as the country's foremost export gateway, the Takoradi Port has over the years seen major expansions works to accommodate larger vessels which in turn enhanced its port operations. While the initial capacity of the port was to handle 1 million tons of cargo, it was only able to handle 1,153 vessels carrying 2.3 million tons of cargo in 1964, after completion of major rehabilitation works in 1956 (GPHA, 2016). The Takoradi Port is currently experiencing a boom in its operations on

a scale that has never seen before. In 2015 alone, the port handled 27 per cent of national seaborne traffic, 15 per cent of national seaborne imports, 68 per cent of national seaborne exports, 6 per cent of National seaborne container traffic and 7 per cent of transit traffic to the landlocked countries of Burkina Faso, Niger and Mali. Over the years, vessel calls to the port has also increased from 485 in 2003 to 1,525 calls in the 2015 (GPHA, 2016). GPHA attributes these increases in calls to the influx of Oil Supply vessels servicing the oil fields offshore. The scale and scope of the current expansion works, which started in November 2014, are extensive and expected to cost some US\$250million (GPHA, 2016). According to the Ghana Ports and Harbours Authority (GPHA), the expansion works at the port would affect some 53,000 hectares of reclaimed and arable land affecting neighbouring fishing communities such as New Takoradi and Poase. Although no accurate data exists, it is estimated that hundreds of people have so far lost their means of livelihood since the expansion works at the port started. The GPHA, therefore, announced in 2016, the establishment of a Social Impact Fund to support residents who may have lost farmlands due to the expansion works (GNA, February 2016).

TOWARDS A LIVEABLE CITY

The discovery and subsequent production of oil in 2010 has propelled Sekondi-Takoradi to global fame as one of Africa's newest oil cities. Sekondi-Takoradi has undergone rapid changes in its urban landscape as a result. Oil has brought in its wake major changes in the city's urban economy as the impact of continuous influx of population leading to increased population levels take full force. So far, this situation coupled with the invasion of oil companies is driving major land use changes in the city. Accompanying the presence of oil companies and related infrastructure is the considerable effect of spin-off investments in the city's existing real estate market and commercial developments as can be seen in the proliferation of hotels, guest houses and nightclubs. Similarly, there are exciting opportunities for construction of new houses and offices. Oil would henceforth continue to drive the economic growth of the city, with the Takoradi Port that is expanding strategically to accommodate demands of the oil industry. However, current urban management tools have been ineffective in dealing with the effects of oil mainly as a result of inadequate funding support to city authorities, poor logistics, poor staffing etc. In view of these numerous challenges city authorities would have to be innovative in their approach to urban growth management.

Since oil, many authors have attempted to analyse the impacts on the urban economy in a bid to prescribe the best solutions to aid the state, oil companies as well as city authorities in managing the effects. Some of the recommendations to dealing with the effects of oil, contained in earlier research, are relevant and practical to enhancing the benefits of oil. For example, Eduful and Hooper (2015) recommend, among others, the setting up of a housing or community infrastructure improvement fund specifically aimed at suburbs facing challenges from oil-induced migration. The international oil companies would provide financial resources towards the fund while ensuring that urban development unfolds more equitably in future (Eduful and Hooper, 2015). Obeng-Odoom (2015) also advocates for the prioritisation of intra-urban rail development as against road infrastructural improvements to enhance the quality of travel, reduce pollution and road accidents and ameliorate the growing vehicular congestion in the city. He further explains that this option is more affordable and appeals to poorer urban workers while serving as a dais to foster more efficient local and national economic development. The concept of land pooling has also been widely espoused by Ballaney (2008). Under this model, city authorities would bring together a group of land owners for the purpose of land use planning within areas yet to experience growth. This would ensure that city authorities use planning processes to influence future growth of settlements especially at the urban fringes of Sekondi-Takoradi.

Moving forward, the Sekondi-Takoradi Metropolitan Assembly must use its planning processes to forecast likely consequences of continuous oil and gas development and take various steps in collaboration with all land sector agencies to overcome the land challenge posed by the oil discovery. The main challenge here is that, most lands are held privately while planning remains a public function. The roles of these institutions should, therefore, not only be limited to approving development applications but also extended to cover significant control over the supply of land for development in the urban area. Countries such as the United States of America have used planning as a major tool to control the leasing of lands in and around oil cities. For example, land agencies are only expected to make lands available for leasing only when the planning process is used to forecast the concerns of oil.

The challenge of oil-induced urbanisation is real. City authorities must awaken and be innovative in their responses to this challenge of the managing rapid growth vis-à-vis the current situation of indiscriminate allocation of lands. In Takoradi especially, there are several properties belonging to the public sector that need to be redeveloped or relocated to be consistent with the new land use structure and indeed the new image of Sekondi-Takoradi as an oil city. Additionally, once the strategy of consolidating Sekondi as the administrative capital is endorsed, all the major Government administrative buildings in Takoradi in areas such as Windy Ridge and Beach Road need to be relocated into newly created Government offices, thus releasing hundreds of acres of prime land unto the land market (STMA, 2012).

Greater land use control can also be exerted by the Town and Country Planning Department (recently renamed and upgraded into Land Use and Spatial Planning Authority) within the already built up areas of the city while also implementing land use plans for the urban fringes in anticipation of urban sprawl. Emphasis can be placed on the intensive use of land while insisting on vertical developments around the Central Business District. For example, while the CBD can be described as a busily congested but low productivity zone, much of the traffic is rather predictable and avoidable (STMA, 2012). City authorities can therefore apply the simple but very effective tools contained in the structure plan to minimising congestion through urban regeneration into a modern competitive Central Business District. The successful implementation of the proposed structure plan would however depend on many factors. One such important factor is the level of involvement of the community and other stakeholders. In achieving this, STMA and all relevant land use agencies should adopt a more participatory approach to planning where landowners and other stakeholders are actively engaged in the decision making process.

The issue of slum developments which distorts the urban scene can be tackled by strategically designing appropriate upgrading programmes to improve living conditions within these slums. Similar to most slums in Ghana (Obeng-Odoom, 2011), the slums around New Takoradi and Effiekuma are characterised by poor sanitary and housing conditions, high population densities and poor accessibility. By upgrading existing slums, the Assembly would be improving upon the infrastructure base of the city while also controlling the proliferation of other ones. It is encouraging to note that city authorities have established the Citywide Settlement Upgrading Fund (CSUF) with support from the UN-HABITAT's Slum Upgrading Facility (SUF) Pilot Project. However, its real impact in terms of slum upgrading is yet to be felt as the fund has only been able to fund some 3 minor projects since 2010 including two market sheds at Kojokrom Market and a public facility in Effiekuma. City authorities would have to scale up CSUF to fund the implementation of an aggressive but humane approach to dealing with the issue of slum development on a large scale as the effects of continuous influx of migrant population gathers momentum. One way of achieving this is by adopting a street-led city wide slum upgrading strategy that goes beyond the usual piecemeal and project based interventions towards a more inclusive citywide approach that relies on streets as conduits for physical, social and cultural integration of existing slums into the entire urban fabric. This process is well documented by UN-HABITAT's Claudio Acioly who draws on experiences and case studies from around the world to demonstrate the role of streets in physical transformation of slums. He argues that this approach could gradually create and establish the future urban layout of slum communities thereby forming the basis for legalization and regularization of land tenure (UN-HABITAT, 2012).

The concept of land pooling could also prove to be very effective in ensuring the sustainable supply of land for urban infrastructure in Sekondi-Takoradi. Under a land pooling model, the public planning agency or development authority temporarily brings together a group of peri-urban landowners for the purpose of planning (Ballaney, 2008). Accordingly STMA would prepare land use plans for the urban peripheries, yet to experience growth, while inducing landowners to contribute land for the purpose of urban infrastructural developments. The owners would contribute land for public uses such as roads, open spaces, schools, and hospitals, and the remaining land would be 'readjusted' into suitable parcels for private investments.

Land pooling offers many benefits as an urban management strategy while ensuring that planning influences the future growth of settlements. Ballaney (2008) observed that land pooling also delivers developable lands with regular shape, improvement in accessibility, increased potential for development, availability of social and physical infrastructure in the neighbourhood, better linkages with other parts of the city and improvements in the living environment.

In the area of transportation, it is recommended that the Urban Roads Department in the short term undertake major road repairs as well as widen the capacity of existing ones to accommodate the increasing traffic. In the long term however, more alternative and interconnecting routes would have to be developed since the existing radial network offers few. The planned development of a transport terminal for haulage trucks at Mpintsin by the Assembly would also go a long way to improving the traffic situation in the city while halting the continuous deterioration of major roads. The Assembly and Urban Roads Department must also promote greater public transport use in the form of buses. However, to promote a shift from the use of private cars to public ones, it is important to make these alternative means of transport more environmentally friendly, convenient, comfortable and cheap to use.

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